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## RESEARCH DEPARTMENT

### KIDDERMINSTER U. H. F. RELAY STATION : SUMMARY OF INSTALLATION

Technological Report No. RA-3/9  
UDC 621.396.712. 1967/35

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for Head of Research Department

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This Report uses SI units in accordance with B.S. document PD 5686.

U.H.F. RELAY STATIONS : SUMMARY OF INSTALLATION

NAME: 102.2 KIDDERMINSTER

TYPE: 2

TRANSMISSIONS COMMENCED: 22.5.67 (TRADE) 5.6.67 (SERVICE)

SITE DATA

LOCATION: Burlish Camp

GRID REFERENCE: SO 808739

HEIGHT, a.o.d.: 84 m (276 ft)

SUPPORT MAST

TYPE: 46 m (150 ft) tower

OVERALL HEIGHT: 56 m (185 ft)

FREQUENCIES

BAND: V

CHANNELS: 54, 58 (BBC-1)

61, 64 (BBC-2)

RECEPTION

PARENT: Sutton Coldfield

CHANNELS: 40 (BBC-2), 43

46 (BBC-1), 50

POLARIZATION: Horizontal

AERIALS: 2 x 4 $\lambda$  Troughs

AERIAL HEIGHTS: 23 m (75 ft) a.g.l.

26 m (85 ft) a.g.l.

TRANSMITTERS

TYPE: (1) S.T.C. TWT 50W  
(2) TWT 200W

OPERATING POWER: (1) 0.039 kW  
(2) 0.155 kW

FEEDERS

TRANSMITTING: 47 m (155 ft) HF 15/8  
+ 3 m (10 ft) UR 67

RECEIVING: BICC T 3319

TRANSMITTING AERIAL

TYPE: Standard cardioid

RADIATION CHARACTERISTICS

POLARIZATION: Vertical

MEAN E.R.P.: (1) 0.28 kW

(2) 1.12 kW

RADIATING LENGTH: 16 $\lambda$

H.R.P.: Fig.1

V.R.P.: Fig.2

MAXIMUM E.R.P.: (1) 0.5 kW

(2) 2.0 kW

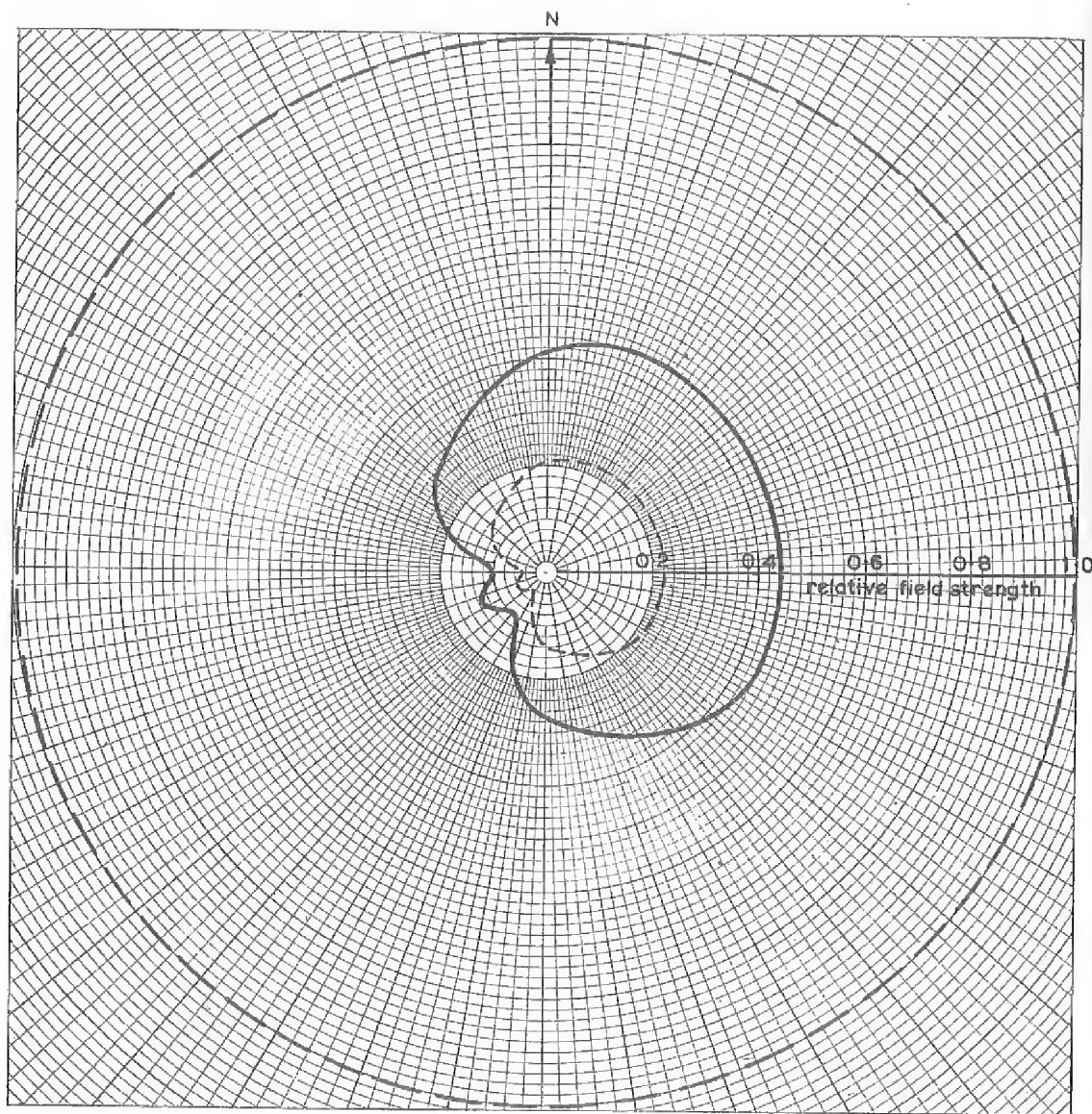
MEAN HEIGHT: 49 m (161 ft) a.g.l.

NOTES: (1) Initial operation

(2) Power increase when 200W TWT amplifier available

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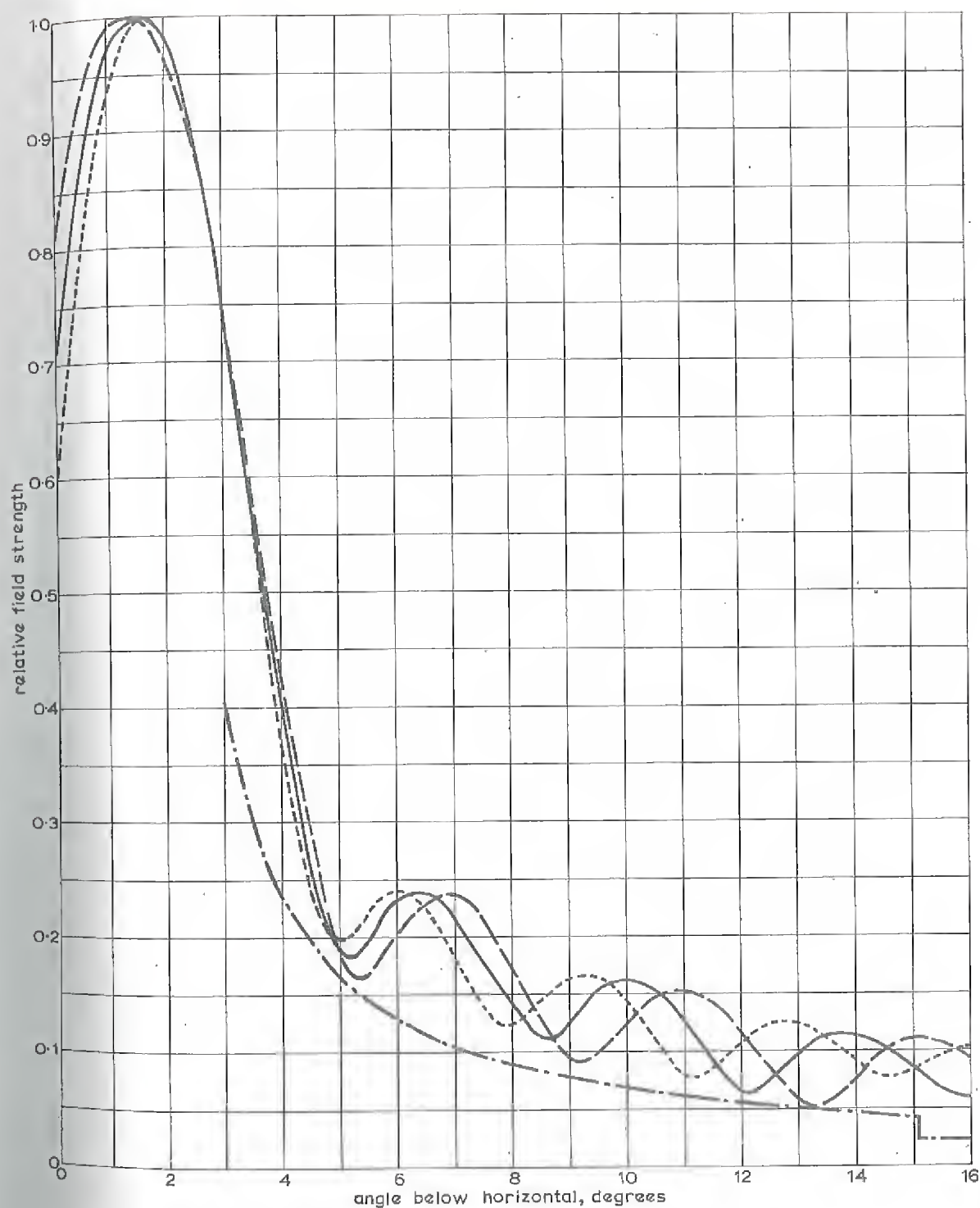


# KIDDERMINSTER

Fig.1. Horizontal radiation pattern  
VERTICAL POLARIZATION

- Transmitter power: 0.039 kW  
Mean E.R.P.: 0.28 kW
  - Transmitter power: 0.155 kW  
Mean E.R.P.: 1.12 kW
  - Stockholm E.R.P. limit
- Unit field corresponds to an E.R.P. of 10 kW





KIDDERMINSTER

Fig. 2. Vertical radiation pattern

— — — 710 MHz  
 — — — 790 MHz  
 . . . . . 870 MHz  
 - . - . - Specified minimum field

